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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/527,408

03/11/2005

Wayne Conrad

12800-30/PMdC

4779

1059

7590

03/25/2008

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EXAMINER

CECIL, TERRY K

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

03/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/527,408	<b>Applicant(s)</b> CONRAD, WAYNE	
	<b>Examiner</b> Mr. Terry K. Cecil	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 2-1-2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3-11-2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2-8-2007</u> .  | 6) <input type="checkbox"/> Other: _____                          |

*Applicant has canceled the nonelected claims. Only elected claims 1-11 remain.*

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: numerous typos and misspellings occur in the specification—e.g. “removable” should be “removably”[0005 (note this numbering corresponds to the paragraph numbering of applicant’s published application)]; “is a is a” should be “is a” [0013]; and in [0021] applicant uses the same reference no. “28” for two different elements, i.e. the sidewalls and the water inlet. The aforementioned errors are only exemplary; applicant should check the entire specification. Appropriate correction is required.

### ***Drawings***

2. The drawings are objected to because of the following:
- They are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the biological material and biological cartridge of claims 9-11 must be shown or the features canceled from the claims. *No new matter should be entered.*

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be

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renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Double Patenting***

3. Applicant is advised that should claim 2 be found allowable, claim 3 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Objections***

4. Claims 5 and 6 are objected to because of the following:

- In claim 5, line 3, “the is” should be “that is” and
- In claim 6, line 2, “if flow communication” should be “in flow communication”.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are indefinite because of the following reasons:

- Claims 7 and 8 seem to mis-describe the invention since as explained in the specification, the sealing element in the conduit between the containers is shared by both such that each container does not have a respective sealing element(s).

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

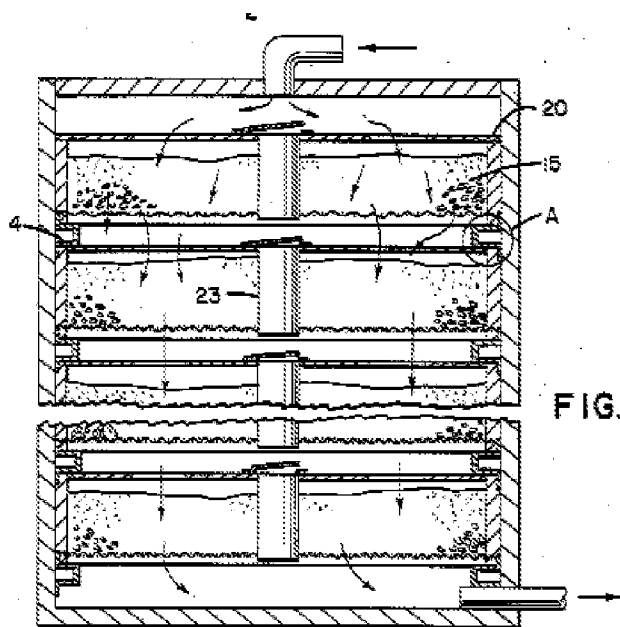
A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Barbaro (U.S. 4,906,381). Barbaro teaches a water treatment apparatus having an inlet port 11 and an outlet

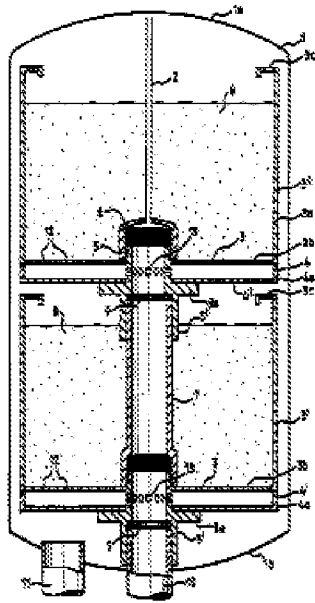


**FIG. 3**

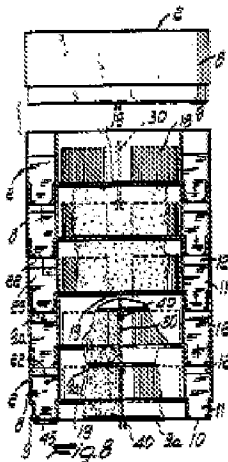
port 12 and a plurality of removable container modules 15 including sand therein (col. 1, line 60; col. 2, lines 35-51) [as in claim 1-5]. As shown by the arrows, flow through the modules is serial.

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9. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 2,276,330, hereinafter "330". The threaded connectors allow each of the sand containers to be removable [as in claims 1-5].



10. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by EP 0381032, hereinafter '032.



***Claim Rejections - 35 USC § 103***

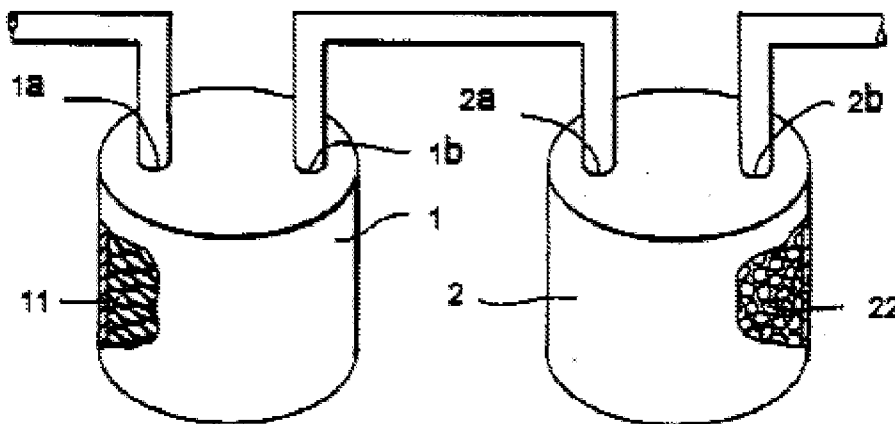
11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 1-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holland (U.S. 5,662,801) in view of Gershon et al. (U.S. 5,427,683) and Kool (U.S. 5,344,558).



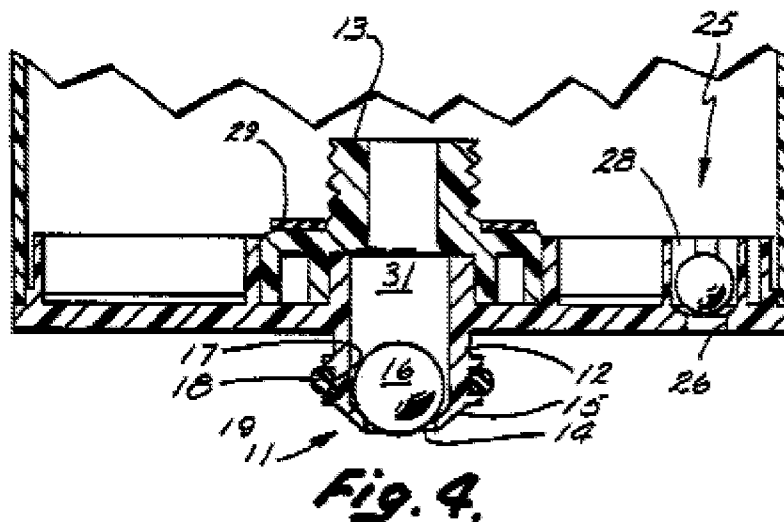
Holland teaches a serial flow arrangement for filtering water that includes a plurality of containers at least the first of which contains sand (col. 4, line 25). Holland teaches his second container includes a stratified arrangement of activated carbon absorbent but isn't explicit that



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the second container includes sand. However, Gershon et al. teaches sand as well as activated carbon as water treating absorbents (col. 1, line 67 to col. 2, line 2) [as in claim 1]. It is considered that it would have been obvious to one ordinarily skilled in the art at the time of the invention to have the sand of Gershon in the second container of Holland, since Gershon teaches sand to also be an absorbent for treating water and simple substitution is within ordinary skill; or having sand along with the carbon in the stratified filtering material in the second container would be within ordinary skill since such would provide the benefit of absorbing a wider variety of contaminants.

Holland in view of Gershon doesn't teach the filtering elements to be individually removable and having respective inlet and outlet ports as well as sealing elements. However such is taught by Kool. The inlet and outlet ports and sealing elements are shown below [as in claims 7-8].



It is considered that it would have been obvious to one ordinarily skilled in the art at the time of the invention to have the removability and sealing inlet and outlet of Kool for each container of

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the modified Holland, since Kool teaches the benefit of preventing water leakage during filter replacement (col. 1, lines 15-19).

13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over any of '330, '032, or Barbaro in view of Simpson et al. (U.S. 5,264,129). Simpson teaches a layer 14 including bacteria (biomaterial) for producing schmutzdecke. It is considered that it would have been obvious to have the biomaterial 14 of Simpson in any of '330, '032, or Barbaro, since Simpson teaches the benefit of decreasing the time for the formation of a bacterial treating layer.

14. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of '330, '032, or Barbaro in view of Tucker (U.S. 6,314,676). Tucker teaches a prefilter 21 that contains an inoculation of biomaterial (bacteria). It is considered that it would have been obvious to have the filter 21 of Tucker in at least the top container in any of '330, '032, or Barbaro since Tucker teaches the benefit of inoculating other filters to provide treatment. Upon placement of the prefilters within the container, such would be considered a cassette. It would have been obvious to the skilled man for the cassette to be openable in order to refill as necessary.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Terry K. Cecil whose telephone number is (571) 272-1138. The examiner can normally be reached on 8:00a-4:30p M-F..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mr. Terry K. Cecil/  
Primary Examiner, Art Unit 1797

TKC